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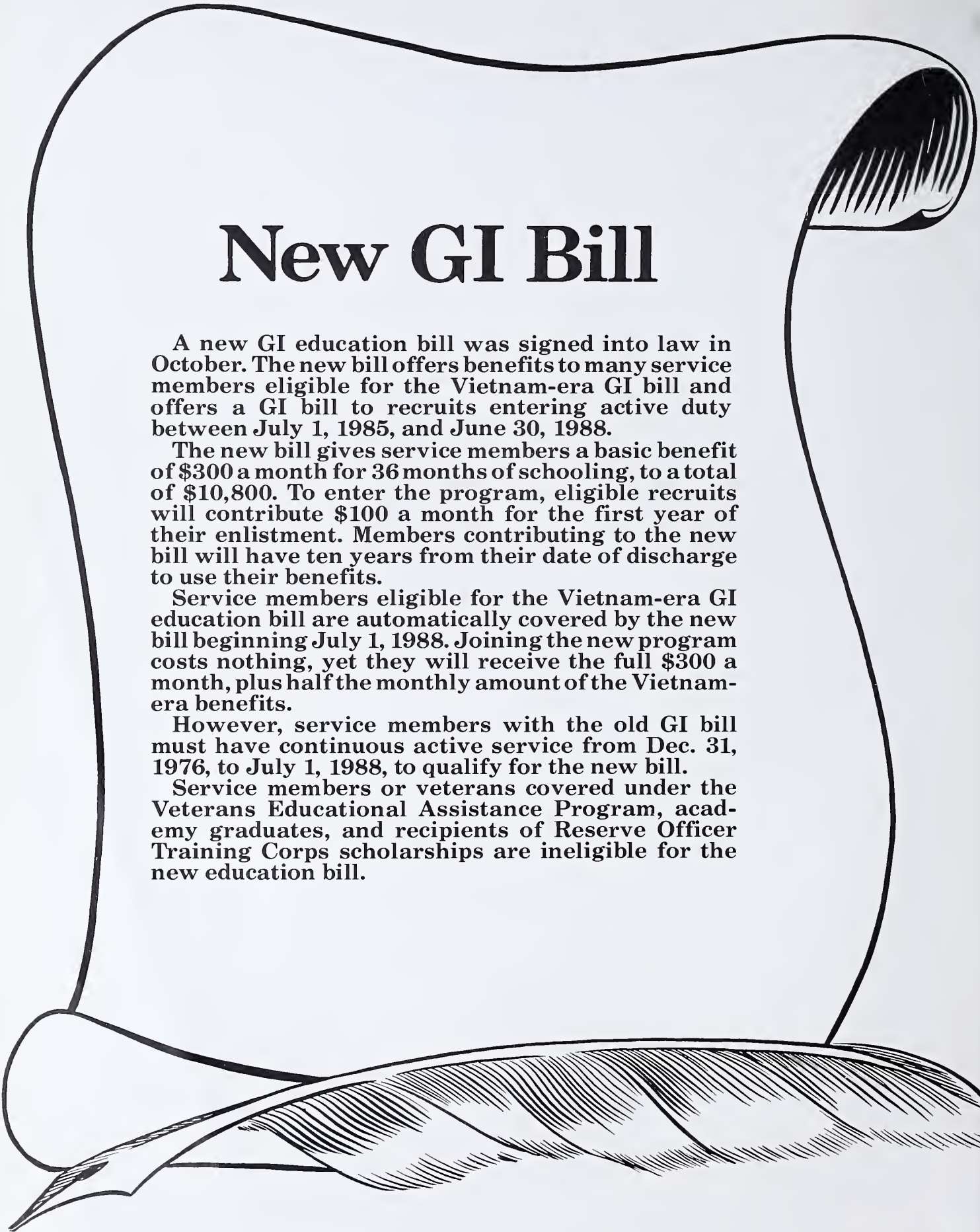
Profile

a guide to military careers



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Recruit
Training
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April 1985



New GI Bill

A new GI education bill was signed into law in October. The new bill offers benefits to many service members eligible for the Vietnam-era GI bill and offers a GI bill to recruits entering active duty between July 1, 1985, and June 30, 1988.

The new bill gives service members a basic benefit of \$300 a month for 36 months of schooling, to a total of \$10,800. To enter the program, eligible recruits will contribute \$100 a month for the first year of their enlistment. Members contributing to the new bill will have ten years from their date of discharge to use their benefits.

Service members eligible for the Vietnam-era GI education bill are automatically covered by the new bill beginning July 1, 1988. Joining the new program costs nothing, yet they will receive the full \$300 a month, plus half the monthly amount of the Vietnam-era benefits.

However, service members with the old GI bill must have continuous active service from Dec. 31, 1976, to July 1, 1988, to qualify for the new bill.

Service members or veterans covered under the Veterans Educational Assistance Program, academy graduates, and recipients of Reserve Officer Training Corps scholarships are ineligible for the new education bill.



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About the covers

Front: Seaman recruits Rosie Norman (left) and Pam Skaggs put a high gloss on their shoes during boot camp. Shoe shining is just one of many steps to becoming spit-and-polish Navy members. (Photo by Tracy L. Tanner)

Back: Spec. 4 Dezia V. Ingram, a truck driver with the 24th Transportation Battalion, Ft. Eustis, Va., checks his vehicle's air filter before "getting on the road again." (Photo by Tracy L. Tanner)

The first adventure

story by Linda L. Mitchell

Dear Jane: "Welcome Aboard the World's Finest Navy!" Congratulations on taking the first big step toward being something special, "a Navy woman." You will soon learn we have much to offer in education, training and travel. To me, even though I enjoyed the schooling and travel, and feel it is a good way to make a living, the best part of the Navy is the fun. When you go to the places we go, and do the things we do, it has to be fun."

Many women receive a similar letter before arriving at the Naval Training Center in Orlando, Fla. But, if these women expect that boot camp will entail no more than soaking up the sun in Mickey Mouse land, they're in for a big surprise. Boot camp prepares people to become full Navy members, which also includes the entitlement to have fun.

The new female recruits learn they have entered the land of "early to bed (9 p.m.) and early to rise (5 a.m.)," with 16 hours of physical conditioning and academic development stuffed in between.

Company commanders greet the women as they step off the bus in front of the in-processing facility. These petty officers explain in detail what the women

Seaman Recruit Pam Skaggs practices cardiopulmonary resuscitation techniques on Seaman Recruit Rosie Norman. (Photo by Tracy L. Tanner)



Recruit training



Under the direction of experienced firefighters, recruits learn shipboard damage control techniques, including use of fire hoses, pumps and foam.

hours weekly. "By the seventh week, 45 sit-ups, 25 push-ups, three sets of 25 flutter kicks, 20 mountain climbers and 75 jumping jacks are mandatory. We must also run 2.25 miles," explained one recruit.

Supervised by trained firefighters, recruits practice extinguishing fires using foam, hoses and pumps. These shipboard damage control techniques are necessary to keep a waterborne home ship-shape and afloat.

Next comes a "cruise" on USS Bluejacket. The old Navy saying, "If it doesn't move, paint it; if it does move, salute it" applies. A recruit explained, "Aboard a landlocked two-thirds scale model of a destroyer-escort, we clean, strip and paint every stationary object. We navigate, manning the ship's wheel; and use compasses, sextants and other navigational devices. That's a challenge." They also practice life saving techniques.

Gas mask equipment along with gas chamber testing, plus pistol firing experience increases the recruits' military knowledge. In addition, a week called Fleet Duties and Routines introduces trainees to a naval base's organizations and operations.

Training isn't all work and no play, however. "We're encouraged to join the recruit drill team, the 50-state flag team, the color guard, the honor guard or the Recruit Bluejacket Chorus. We practice during the evenings and on weekends, and perform at weekly graduations and occasional off-base events," another recruit said.

With the exhausting hours of training nearly behind them, the

will accomplish during the next eight weeks.

"New trainees learn immediately that everything men do, women do," a recruit said. This includes regulation haircuts. "Although ours is not as drastic as the men's, it can't exceed the top of the uniform collar. I find short hair a blessing with only 15 minutes between wake-up and breakfast. Makeup and hairstyling are things of the past during training," a soon-to-be graduate laughed.

Uniform issue further transforms recruits. "Denim shirts, tee-shirts, cotton dungarees, chukka boots and a hat replace civilian garb. Underclothes, which must be white, are the only garments permitted from home," explained a recruit.

Recruits suggest bringing only the bare essentials, including good quality running shoes and a conservative one-piece bathing suit. The more arrivals bring, the more they must send home. New sailors receive a "ditty bag" containing personal items ranging from antiperspirants to shower shoes.

The eight-week training period molds civilians into functional military members. Indoctrination involves memorizing and practicing customs, courtesies and Navy rules, plus mastering marching, naval history and traditions.

"The first two training weeks cured us of thinking we knew how to pack a bag, fold clothes or make a bed properly," a seaman recruit said. "Recruits quickly discover how to do everything the Navy way!"

Changing to become part of the Navy team includes learning the language. "We now talk about heads instead of bathrooms; swabbing decks instead of mopping floors; and gear adrift versus personal items or anything else out of place," a recruit said. They also stand personnel, locker, company formation and barracks inspections daily.

Outdoor training includes marching to class, meals and appointments; mastering parade maneuvers; and swimming and water survival training. Strenuous aerobic exercises fill several

Recruit training

women emphasized, "One aspect of boot camp—teamwork—can only be accomplished through experience. Eighty women *can* share one 40-bunk bedroom. And 80 personalities and backgrounds can be molded into one disciplined unit. The mornings are hectic with everyone vying for the sinks and showers, but we learn flexibility."

The teamwork, learning, tears and laughter finally end when the recruits proudly participate in pass-in-review ceremonies. Most Navy women agree boot camp was their most challenging experience. One new Navy member proudly exclaimed, "Our company commander demanded perfection. She wanted us to be the best—and we are!"

Seaman Recruit Rosie Norman assures that Seaman Recruit Pam Skagg's body alignment is correct as she practices pushups one evening.

(Photo by Linda L. Mitchell)



Eight weeks training ends as new Navy members march before friends and relatives during their pass-in-review. While most will enter the "A" school training phase, others will begin duties as members of an elite group—the Navy team.

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Serving in the Army's 'navy'

by Tracy L. Tanner

"When people hear I'm in the Army, but work on a ship, they're usually puzzled," said Warrant Officer Lisa Canavan, with the 10th Transportation Battalion at Fort Eustis, Va. "Their first question is, 'Does the Army really have ships?' Most people don't realize watercraft have been a branch of the Army's transportation commands for 45 years."

During World War II, civilians manned hundreds of Army Transport Service ships. However, as the Army's need for water transportation declined, it phased out many of them. Today, the Army's "navy" consists of three ships, several ocean-going tugs, and numerous smaller service craft.

These vessels, and the watercraft operators who man them, primarily move equipment and supplies for the Army, Navy and Marine Corps. But, unlike the Army Transport Service's civilians, who were strictly sailors, these men and women must be both soldiers and sailors. They couple the soldiering skills taught in basic training with the seafaring skills acquired while attending the Army's Transportation School at Fort Eustis.

The school, which lasts six weeks and two days, introduces prospective watercraft operators to various nautical terms and customs. "It's like learning another language. We learned the Army's language during basic and the Navy's during our advanced individual training," said Sgt. Charles West, a watercraft operator also with the 10th Transportation Battalion.

Using a pulley, watercraft operators dressed in Mission Oriented Protective Posture (MOPP) gear, prepare to remove a piece of equipment from a tugboat.



Watercraft operators rig a deuce-and-a-half for lifting from the deck of a landing craft utility. (U.S. Army photo)

Unlike the Navy and Coast Guard, who place many specialists on one ship, members of the Army's "navy" must be adept in every shipboard operational facet, excluding the engine. From piloting the craft to chipping paint, no task is beyond the watercraft operators' training realm.

At the transportation school, students learn maritime communication which includes sending and receiving radio and international code flag messages. They also interpret storm warnings.

Training also encompasses fire-fighting, water survival, pollution control and first-aid. Instructors introduce the traditional marlin-spike seamanship, where students learn nautical knot tying.

Once students have this information under their prospective 'old salt' belts, they must pass a marine certification exam. The exam verifies the individual's nautical knowledge and qualifies him or her to operate U. S. Army watercraft and amphibians.

Watercraft operators may serve on landing crafts, tug boats, air cushion vehicles, freight supply ships, or cranes.

While the types of craft watercraft operators man may seem numerous, their duty stations remain limited. Of the 950 active Army personnel holding the specialty, a majority are stationed at either Fort Eustis, the Panama Canal, Hawaii, or the Azores. Operators see this as both an asset and hinderance. "Because so few people occupy the career field, we know someone at each unit," West said. "But, since there are so few assignments, it limits our chances to see different parts of the world."

Although assignments remain



limited, opportunities for advancement are good. Upon assignment to a vessel, operators begin a licensing process by qualifying in the position he or she fills. Moving up in rank and adding additional licenses, the soldier eventually qualifies and receives a recommendation for advanced deck or engineering officer training.

Although the training, certification and license exams seem unending, watercraft operators can see light at the end of the tunnel. Every facet of the individual's training and testing leads toward a warrant officer appointment. Because the Army doesn't have commissioned officers serving aboard ships, warrant officers run the show.

They are the Army's experts and must possess the highest degree of academic and technical skills required to operate and maintain vessels.

Canavan and her watercraft operator peers will continue to perplex people with their chosen career field. But, she remains firm in her choice. "I could have joined the Navy, but I enjoy the Army's versatility. Sure, we have to know two services' jargon, but we also get to see both worlds. Believe it or not, I enjoy field duty as much as sea duty. And, being able to do both, the days don't become monotonous. We keep busy, and I believe the challenges of both worlds make us better rounded military members," she concluded.

Information Addresses

Department of Defense

OASD(PA)
Directorate for Defense Information, Rm 2E757
Pentagon, Washington, D.C. 20301

Military History

U.S. Army Center of Military History
Historical Services Division
Pentagon, Rm 6A057
Washington, D.C. 20310

Naval Historical Center
Naval History Division
Bldg. 220 WNY
Washington, D.C. 20380

Headquarters Marine Corps
Washington, D.C. 20380

Office of Air Force History
Maxwell AFB, Ala. 36112

U.S. Coast Guard Headquarters
G-BPA Historian
Washington, D.C. 20593

National Guard/Reserve

Army and Air Force National Guard Bureau
(NGB-10)
Washington, D.C. 20310

Chief of Army Reserves
Rm 1D428, Pentagon
Washington, D.C. 20310

Headquarters Air Force Reserve/RS
Robins AFB, Ga. 31098

Marine Corps Opportunities
Box 38901
Los Angeles, Calif. 90038

Navy Opportunity Information Center
P. O. Box 2000
Pelham Manor, N.Y. 10803

Job skills and programs

Headquarters, U.S. Army Recruiting Command
ATTN: USARCCS-D
Ft. Sheridan, Ill. 60037

Navy Opportunity Information Center
P. O. Box 2000
Pelham Manor, N.Y. 10803

Commandant of the Marine Corps (Code MRRA)
Washington, D.C. 20380

AFMPC/MPCM
Randolph AFB, Tex. 78150

U.S. Coast Guard Headquarters
G-PMR
Washington, D.C. 20593

Service Academies

Director of Admissions and Registrar
U.S. Military Academy
West Point, N.Y. 10996

Superintendent (ATTN: Candidate Guidance)
U.S. Naval Academy
Annapolis, Md. 21402

Director of Cadet Admissions
U.S. Air Force Academy
Colorado Springs, Colo. 80840

Director of Admissions
U.S. Coast Guard Academy
New London, Conn. 06320

Reserve Officers' Training Corps

Army ROTC
Ft. Monroe, Va. 23651

Navy Opportunity Information Center
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Pelham Manor, N.Y. 10803

Commandant of the Marine Corps
(Code MRR0-6)
Headquarters Marine Corps
Washington, D.C. 20380

Air Force ROTC/RRO
Maxwell AFB, Ala. 36112

SERVING IN NATION'S DEFENSE

story and photo
by Linda L. Mitchell

The loud, eery-sounding klaxon echoes through the hangar where a lone F-4C Phantom II stands prepped and on alert. As the hangar doors slide open, three men sprint toward the aircraft while a loud speaker announces an actual alert in progress.

Quicker than you can say the name of the unit—"Operating Location Alpha Delta, 191st Fighter Interceptor Group (FIG), Air Defense Tactical Air Command (ADTAC), Michigan Air National Guard"—the aircrew completes their pre-takeoff routine. The pilot and weapon systems officer climb into the two-seat fighter interceptor aircraft, don their equipment, and quickly, but precisely, run through their checklist.

Meanwhile, the ground crew chief relays instructions via two-way radio to turn up the engines. After pulling out "remove before flight" ribbons, and dragging wooden chock blocks from in front of the plane's wheels, he runs out to the taxiway to marshal the plane into position. Using both hand and verbal instructions, he guides the pilot—come forward, turn left, prepare to take off.

The crew chief smartly salutes the pilot as he taxis toward the runway. The aircrew's mission—to help defend the southeastern United States against unauthorized intruders and escort them from restricted air space.

The 191st FIG is an alert detachment of the Michigan Air National Guard assigned to Seymour Johnson Air Force Base, N.C. The 26-man detachment includes the commander; aircrews; a first sergeant; crew chiefs; and aerospace ground equipment repair, radar and



avionics specialists. On a rotating basis, these men stand alert duty around the clock, 365 days a year.

They are not "weekend warriors." Lt. Col. Lynn J. Forrest, 191st FIG commander, said, "We are all active-duty career guardsmen attached to Selfridge Air National Guard Base, Mich. We are assigned to Seymour Johnson AFB from one to four years."

The unit is an important element of the Department of Defense's "Total Force" concept. Under this concept, all services, including the National Guard and Reserves, play a major role in defending the United States and her allies.

Forrest explained, "Perimeter defense of the nation includes four continental United States and two Canadian regions, Alaska Air Command and Pacific Air Forces (Hawaii). Our unit is responsible for the southeast region."

The Air National Guard accounts for nearly 73 percent of the resources for continental air defense. Because of this responsibility, the Guard is upgrading

its weapon systems. "Current thinking," said Forrest, "is that Guard interceptor squadrons now equipped with F-106 and F-4 aircraft will convert to either the F-15 or F-16 within a few years. Both the F-15 and F-16 use advanced medium-range air-to-air missiles.

"This is an exciting prospect," he added, "it will give the guard greater capabilities in range, firepower and aircraft systems."

With new aircraft and weapon systems being introduced in ADTAC units, trained personnel are essential. "Anyone coming into these specialized units must have prior military service and be experienced on these systems," Forrest emphasized.

"That's the good thing about being prior service, whether it's Army, Navy, Air Force, Marines or Coast Guard. People enlist in the service in technical career fields like ours, then decide to get out after one or two tours. These technicians and officers can enjoy more stabilized tours and put their skills to work in continuing the National Guard's and Reserve's defense of the nation," Forrest concluded.



'Stick Time'

by Tracy L. Tanner

In the movie *Honeysuckle Rose*, Willie Nelson sang of being on the road. He crooned of "going places that I've never been; seeing things that I may never see again; I can't wait to get on the road again." But, however anxious to get on the road, Willie must have realized a successful trip meant planning and preparation.

Army Motor Transport Operators, or truck drivers, share Nelson's infatuation with the road. Spec. 4 Dezia V. Ingram, of the 24th Transportation Battalion said the 'stick time' is what he enjoys most. "But," he explained, "there's more to driving a truck than getting behind

the wheel and starting her up." Like Nelson, the success of Ingram's trips require a substantial starting foundation.

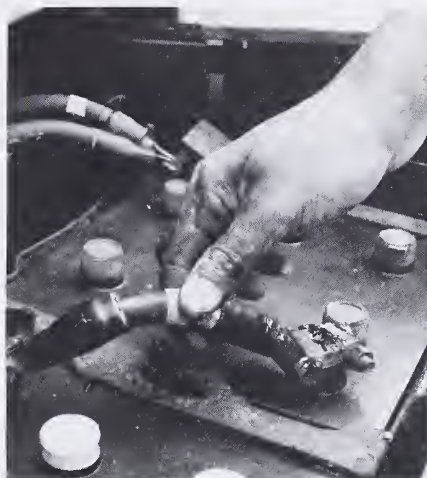
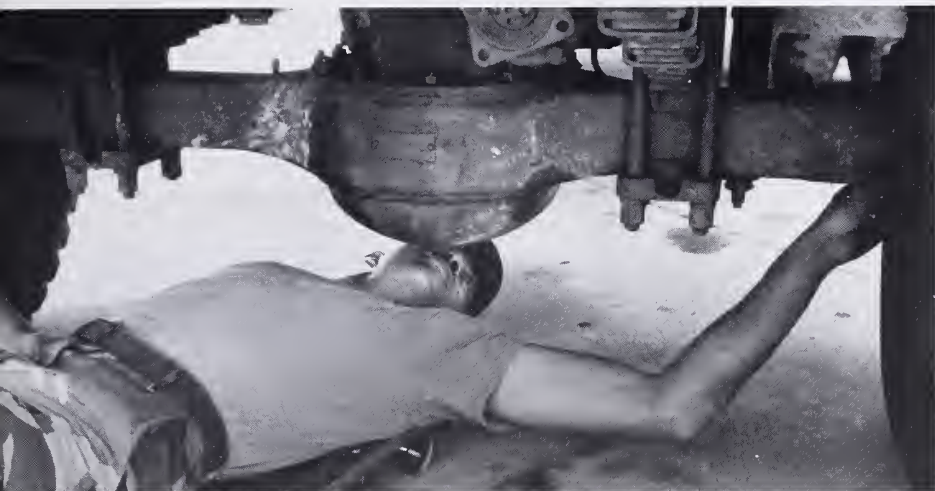
Army truck drivers accomplish this through preventive maintenance (PM). Each day, prior to vehicle sign out, drivers complete a PM checklist. The list requires drivers check fluids, batteries, filters, tires, lights, signals and more. Although some motor enthusiasts may think this prerequisite drastic, the experienced Ingram agrees with the adage, "an ounce of prevention is worth a pound of cure."

"The preventive maintenance checks don't take too long," he said. "An experienced driver can complete the entire procedure within 30 minutes. In fact," he

added, "those checks actually save a lot of man-hours. For instance, if one of my tires went flat and my spare was flat also, I'd be out of luck until a replacement could be brought. Not only would I lose time, I'd look terribly unprofessional."

Once Ingram completes his checklist and all systems are 'go,' he signs out his keys and picks up the day's assignment. Although he doesn't mind the mechanical aspects of the job, he admits driving remains his real passion.

"The 'stick time' is the best part of the job," he said. "Whatever my destination or my load, I always look forward to climbing behind the wheel and getting on the road."



AGE in technology



Senior Airman Lester Doyle, an aerospace ground equipment repair technician at Langley Air Force Base, Va., repairs a valve on a fuel tank dolley. The dolley raises and lowers fuel tanks on aircraft.

story and photos
by Linda L. Mitchell

Dawn breaks over the long row of fighter aircraft standing on the flight line.

Like a giant, slow-turning "wheel," the flight line tangibly gears up for another active flying day. Well-oiled cogs in the wheel, maintenance and weapons crews mesh, making last minute preparations, moving planes into place, starting engines and loading practice ordnance.

To operate efficiently, the giant wheel relies on a smaller wheel— aerospace ground equipment, including tugs, generators, bomb lifts and load banks. Aerospace ground equipment repair technicians are vital cogs connecting the two wheels.

These repair technicians must be aware of the repair status and position of all aerospace ground equipment. They operate towing vehicles and two-way radios to dispatch the proper machines to the flight line for duty. A minor part of their daily routine includes cleaning dirt, oil, grease and corrosion from components and accessories using chemical cleaners, solvents and compressed air.

The primary job of aerospace ground equipment technicians is keeping the ground equipment operating efficiently.

"Ninety percent of our work is 'remove and replace' preventive

maintenance," said Sgt. Dallas Jordan, an aerospace ground equipment repair technician at Seymour Johnson Air Force Base in North Carolina. In depth maintenance encompasses everything from greasing wheel bearings to replacing components in a hydraulic system to installing a fan belt.

"Substituting worn bushings, shafts, exhaust manifolds, and defective wiring is all in our day's work," Jordan said.

These mechanical surgeons operate on support equipment used in Tactical Air Control Systems. They analyze and repair electronic circuitry, control devices, circuit cards and governors. "The test equipment we use is just as sophisticated: multimeters, oscilloscopes, circuit card and transistor testers," Jordan explained.

Aside from these test tools, repair technicians rely heavily on common sense and individual talent. Senior Airman Scott Young, a repair technician at Seymour Johnson, commented, "We don't have big diagnostic machines, like the ones used on cars and trucks, to 'think' for us."

He added, "From knowledge we acquire in technical school, we analyze situations and come up with a solution starting point. We need keen senses of hearing and vision to do the job effectively."

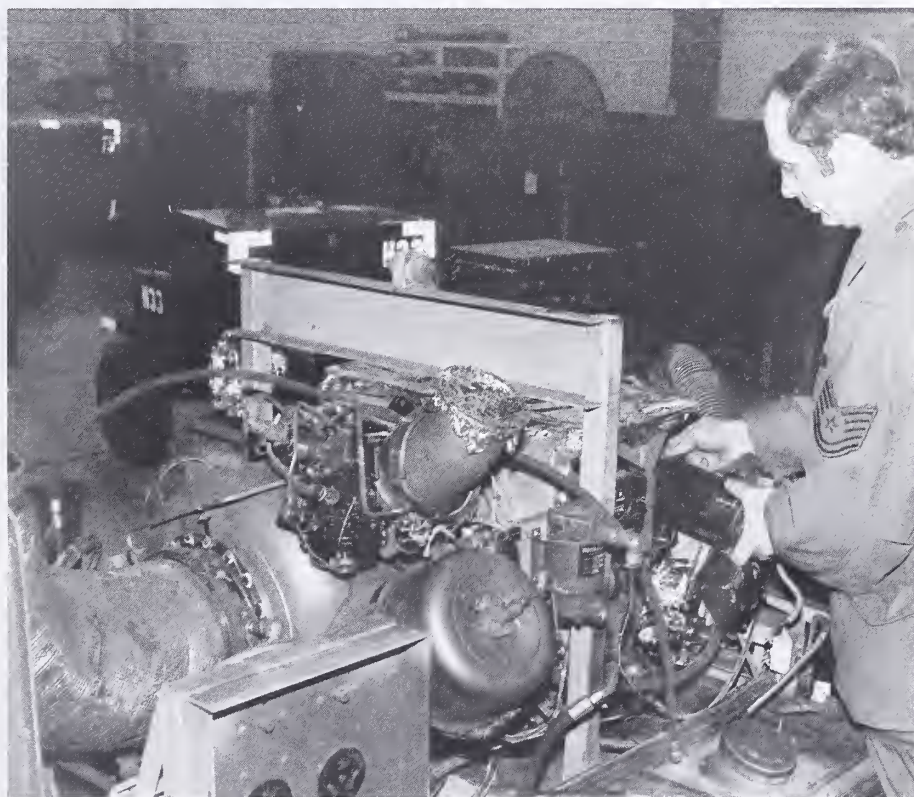
Analytical knowledge is obtained through four weeks of school at Chanute Air Force Base, Ill. "The instructors showed us step by step how to take the engines apart, locate and repair the malfunction and then rebuild them," said Airman Paula Nickerson, a co-worker of Young and Jordan.

Students also learn the basics of electronics, air compressors, and hydraulic, heating and refrigeration systems. "Mechanical aptitude is recommended, and knowledge of basic tools, electricity and physics is advantageous," Young said. He added that attending high school industrial arts courses gives prospective technicians a boost.

Each piece of equipment is basically the same on the inside," Jordan said. "The equipment varies by the type of aircraft it services. For example, there are about 20 different hydraulic test units in the Air Force inventory, varying according to the size of the aircraft. Because of this, on-the-job training for individual units is accomplished at assigned bases."

Considering the variety and numbers of aerospace ground equipment in the Air Force, one efficiently-running small generator may seem insignificant. But these technicians and equipment are important ground-level cogs in the wheel which keeps the Air Force flying.

An airman assigned to the aerospace ground equipment repair shop at Seymour Johnson Air Force Base, N.C., fine tunes a piece of flight line equipment.



Technical Sgt. John Schaefer, an aerospace ground equipment repair technician at Langley Air Force Base, Va., works on a turbine generator. This engine supplies electrical power to grounded aircraft.

Plunging toward

by Linda L. Mitchell

The night air was frigid as the sergeant walked across base to his home. Only the thought of a hot shower and meal made the trip through sub-zero temperatures bearable.

A few feet inside the front door, he heard a gurgling sound and found himself wading ankle-deep in water. After a quick search, the sergeant realized the water was erupting from burst kitchen pipes, and quickly dialed the base plumbing shop for help.

Many people will star in similar scenes at least once in their lives. Though twisting a valve under the sink usually stops the water flow, it takes a military or civilian plumbing expert to assess and repair the damage.

"We're experts in all phases of the trade," said Sgt. Howard Eley.

Each year, the military spends thousands of dollars repairing and replacing pipes and fixtures on bases around the world. This preventive maintenance avoids plumbing mishaps which would result in water damage to tanks, aircraft or buildings.

"We're experts in all phases of the trade," said Sgt. Howard Eley, a plumbing specialist in the U.S. Army Engineering Center at Fort Belvoir, near Alexandria, Va.

"Fitting vents, traps, pumps, meters, valves and couplings or installing sinks, toilets, hot water heaters and showers, is all in a day's work," he added.

Job variety depends on the equipment. Pipe systems run above, under and on the ground; also in, on or between walls, floors and ceilings. Selection of proper fittings hinges on whether the job is on base, in the field or on a ship.

And where plumbing appa-



Petty Officer 3rd Class Alan Doucet, a constructionman assigned to Construction Battalion Unit 411, Norfolk Naval Base, Va., exposes an underground pipe and valve for repairs.

ratus are required, there must also be water. Even in the best conditions, finding a water source is difficult. "Marine Corps utilities specialists learn map reading so they can locate water sources using the coordinates we give them," said Staff Sgt.

Donald Heuman, an instructor in the Engineering School at Camp Lejeune Marine Corps Base, N.C.

After the source is developed, drawing water to purification tanks poses another problem. "We lay an on-ground 'hasty

pipeline', using a series of quick-connect pipes, then pump the water to 3,000-gallon rubber, collapsible tanks. Using precise formulas, utilities specialists mix chemicals in a purifier unit which produces up to 40 gallons of consumable water in a few minutes," Heuman said. The water is used in shower, toilet, cooking and laundry facilities.

"We also use a reverse osmosis purifier," Heuman continued, "which forces water under extremely high pressure through

a filter, trapping impurities. This is the newest system in the Marine Corps inventory; and mastering it enhances a young Marine's promotion chances," he emphasized.

A Navy construction battalion's "plumber's" job is an oddity in the Navy because they are completely shore-based.

Laying pipes and building conveniences in the field are only two of the jobs military plumbers perform. Service members attend courses in plumbing tools and pipe threading, and study some service unique aspects.

A Navy construction battalion's "plumber's" job is an oddity in the Navy because they are completely shore-based.

Seabee (CB) utilitiesmen perform plumbing and pipe-fitting duties at shore activities, but hull technicians perform them on ship.

"Our training encompasses construction work, air conditioning/refrigeration, boilers, and heating plants, along with five weeks of plumbing techniques," said Petty Officer 3rd Class Alan Doucet. The constructionman in Construction Battalion Unit (CBU) 411, Norfolk Naval Base, Va., added, "After graduation, we choose the area we want to specialize in."

Like most military plumbers, Doucet had some plumbing experience before entering the service. "'A' school is basically a refresher course. The Navy prefers all students have prior experience before entering the field," he said.

Coast Guard damage control specialists also learn several areas but specialize in one. "Our fields include carpentry, sheet

metal, welding and plumbing," said Petty Officer 2nd Class Gary R. Cunningham, assigned to the Fifth Coast Guard District Assistance Team, Portsmouth, Va. "But, welding and plumbing have a higher priority than carpentry and hanging dry walls," he added.

As with Navy hull technicians, Coast Guard damage control specialists install and maintain shipboard plumbing facilities. The job is a little bit more than that, however. "We are shipboard firefighters and structural repairmen, plus we monitor and decontaminate chemical and nuclear hazards. For example, if our ship takes a hit from a torpedo. We extinguish fires, make emergency flood control repairs and pump out the water. Then we make semi-permanent repairs to the ship's side and damaged equipment," Cunningham said.

"One thing you can say about this job," said Air Force Staff Sgt. Raymond C. Thomas, 1st Civil Engineering Squadron, Langley Air Force Base, Hampton, Va., "is that no two days, jobs or bases are alike."

"At my last base, I worked on Titan II missile plumbing systems, checking stress tolerance, and hydraulic and high

pressure air lines," Thomas said.

"My job at Langley encompasses fire hydrant and natural gas maintenance. I also operate the backflow prevention system," he explained. "This prevents chemically or diseased water from entering the base's water supply."

"Flexibility is important," Thomas continued. "I'm often sent out on field exercises, or called at all hours for emergencies. The job is often dirty, but it still has to be done."

As dirty as it can be, however, the job has its advantages. Cunningham explained, "I don't go into each job blind, but I may not always have everything I need. Creativity is a plus. I have the opportunity and a major responsibility, to make my own decisions."

Plumbing work is very demanding physically and mentally. However, whether they're mending burst pipes in the middle of the night, installing natural gas lines, or providing pure water for thirsty troops, military plumbers dig in and get the job done right.

Sgt. William Postich, a plumber in the 1st Civil Engineering Squadron, Langley Air Force Base, Va., solders two leaking sink valves and pipes.



success



story and photos
by Dave Marriott

All of a squadron's technicians and mechanics play an important role when it comes to keeping an aircraft flying," said Gunnery Sgt. Michael D. Letourneau, a power plants mechanic stationed with Marine Attack Squadron (All Weather) 332 (VMA[A W]-332) at Marine Corps Air Station, Cherry Point, N.C. "The avionics technicians ensure the navigation systems work, the ordnance technicians maintain the weapons systems, and the structural mechanics keep the airframes sound.

"But without power plants mechanics, the other technicians might not be needed," he continued. "Power plants mechanics maintain and repair aircraft engines. And let's face it, an aircraft without an engine is like an aircraft without a pilot—useless."

Power plants mechanics remove, repair, and replace jet engines, jet engine components, generators, and fuel and lubrication systems. They also maintain and repair aircraft tailpipes, throttle controls and fuel float transmitters; and perform engine inspections.

We perform engine inspections every 100 and 750

flight hours," Letourneau said. "The 100 hour inspection is the easiest. We replace the filters and check the engine housing, power lines, and tailpipes for cracks. The 750 hour inspection takes longer and is more detailed. We drop (remove) the engine and inspect every component for wear and damage.

"Dropping an engine is an enormous task," he continued. "On the A6 aircraft, each engine weighs more than 2,300 pounds. Barring complications, it takes an experienced three-man crew over an hour to unbolt. Once unbolted, we lower the engine onto a bomb cart, wheel the cart into the hangar, and repair or replace parts as necessary.

"But the 750 hour inspection isn't the only time we remove an engine," added Sgt. Shari L. Jamison, the only female power plants mechanic with VMA (A W)-332. "A few of the systems and components we work on, and many of the other technicians repair, are located above or alongside the inside engine wells and can't be reached unless we drop the engine."

Approximately half the repairs which power plants mechanics perform can be accom-

plished with the engine attached. "We remove some parts and fix them in the hangar," Cpl. Richard S. Stepanik, a power plants mechanic with 332, said. "And believe it or not, these are often the greasiest and hardest jobs.

"How difficult a job is, depends on the part's location. The port (left) engine is fairly open, its components can be easily reached. The starboard (right) side isn't. Repairing some starboard parts is like trying to change the spark plugs in a Toyota pickup truck equipped with a V-8.

"The fuel pump is one example," he continued. "It takes at least eight hours to remove, install new gaskets and rings, and replace."

After replacing any engine component, power plants mechanics fine-tune the engine. "We use the same procedure an auto mechanic uses to tune a carburetor," Letourneau said. "We adjust the idle and military setting by tightening a screw. When the gauge gives the correct reading, we know full power is realized."

Power plants mechanics work on one of seven engines used in

POWER PLANTS

Marine Corps jet aircraft. "Regardless of which engine they'll be working on, all power plants mechanics attend the Aviation Machinist's Mate Jet Engine Course," Stepanik said. "After its completion, they're transferred to a squadron and specialize on a specific engine."

The basic course introduces prospective mechanics to the job's administrative and mechanical aspects. Students study technical manuals, publications, naval aircraft logs and records. Additional classes include introductory mathematics, physics and electricity. After studying layout, measuring, and handtools, they learn the characteristics common to all jet power plants.

Students study the principles of jet engine operation and thrust development. They disassemble and reassemble engines, remove and install starting, ignition and lubrication systems, plus practice performing damage inspections, corrosion control, starting equipment operations and aircraft refueling.

"The basic course is fairly inclusive," Jamison said. "But you really don't get a line on the job until you're in a squadron. At school, if I tightened a valve too tight, set the idle wrong or missed a crack while inspecting an engine, it really didn't matter too much—the instructor would find the mistake and I'd correct it.

It's different in a squadron. The engines I work on are real, not training aids. I don't have an instructor looking over my shoulder at all times. I can't afford to tighten a valve too tight or set the idle wrong. The consequences could be disastrous.

"Responsibility is one of the reasons I like this job," she continued. "I also enjoy the job's



Gunnery Sgt. Michael D. Letourneau, a Marine Corps power plants mechanic, checks the engine well of an A6 attack aircraft for corrosion. Checking the airframes, tubing and wiring for corrosion damage and wear is one aspect of the 750 flight hour inspection.

variety. One day I might drop an engine and the next replace a tailpipe. Each day differs from the next.

"What I like most about the job is the sense of accomplishment I feel when one of our

planes takes off," Jamison added. "An aircraft can fly without radar, and an aircraft can fly without bombs, but there are two things an aircraft can't fly without—pilots and engines. And I maintain the engines."

Story by B. A. Cornfeld

Naval activities at Long Beach sit right in the middle of one of the largest, most diverse playgrounds in the United States: Southern California.

Miles of beaches beckon sunbathers, water skiers and surfers almost year-round. Small craft skippers maneuver their pleasure craft upon waters where sailing conditions are so good, one local mariner claims they are "almost sinful."

Thousands of miles of multi-

Naval Station Long Beach reflects its Southern California surroundings. Large grassy areas beckon Navy men and women to break away from their offices and shipboard spaces for picnic-style lunches. The mole, a man-made buffer against the sea, has plenty of space within its confines for holding large picnics and parties, jogging, walking or simply sitting and watching the ocean, with or without sunrise.

The Queen Mary, a bygone symbol of seagoing luxury now serving as one of the more

offshore island gunnery areas, easy access to the sea and a savings in fuel transportation costs because Los Angeles Harbor was one of the world's great oil ports.

The naval station, like Southern California, has changed throughout the years. Ten years ago, the station was home port to about 150 warships. But five years ago, it was reduced to a support facility and was used only by Naval Reserve Force ships. Now a fully operating naval station again, Long

LONG BEACH

Sailor's paradise

lane freeways provide easy access to Los Angeles, Santa Barbara, Malibu, San Clemente, San Diego and vacation spots along the coast and the mountains, lakes and deserts of the region's interior.

The area is a mecca for physical fitness buffs, and sports-minded Navy men and women can find their favorite activities within reasonable driving distance. Even in late fall and early winter, one can swim or surf during the morning and ski in the mountains the same afternoon.

Los Angeles, with its professional sports teams, cultural attractions and entertainment offerings, is only minutes north of the Long Beach naval complex. Not much farther is the glitter and glamour of Hollywood and Sunset Boulevard. San Diego and Sea World are 130 miles to the south, with Mexico only a few miles farther down the road.

Closer to the naval station, only 40 minutes by car, are Disneyland and Knott's Berry Farm. Either place offers more than enough entertainment to keep children and adults busy for a day.

unusual hotels in America, is permanently anchored nearby. Santa Catalina Island, a resort west of San Pedro, is visible from Long Beach and is accessible by ferry, boat or aircraft.

Tickets to many events and attractions are sold at discount by the naval station's recreational services offices. In addition to an amateur radio station, Navy recreation services in the area include a 297-acre golf course, swimming pools, a gymnasium and athletic fields, an auto hobby shop, a 195-slip marina, an arts and crafts center, picnic areas and a child-care center. And for private pilots and aspiring aviators, there's an aero club with six aircraft.

But duty at this growing naval complex is more than the opportunity to have a good time. The area also has interesting aspects for history and geography buffs.

San Pedro Bay was home to battleships as far back as 1919. The ill-fated battleships anchored at Pearl Harbor on Dec. 7, 1941, were home ported in San Pedro Bay the year before. The San Pedro-Long Beach roadstead offered several advantages for naval operations. It offered good repair facilities, nearby

Beach is scheduled—by the end of this decade—to become home for some 30 Navy ships.

Today, there are 23 ships home ported there, with 10,000 military personnel assigned and 20,000 family members.

Although Long Beach seems like paradise, many service members and their families find the cost of living extremely high. The average cost for a two bedroom unfurnished apartment exceeds \$450 per month. This does not include utility fees. A three bedroom house rents for \$700 plus. There are 1,900 naval housing units available in the six surrounding civilian communities. Two hundred more units are planned.

Despite the high cost of living, Long Beach is still seen by some as a rising star among the Navy's stateside duty stations. Indications are that it may soon rank among the top choices for sailor's "dream sheets." It's a place that abounds with sports events, entertainment and cultural wonders—and excellent educational opportunities. In short, the Long Beach area has a long list of offerings—more to offer than could be taken advantage of in one tour of duty.



There's a lot to see in Long Beach including the naval station's marina (below). (Right) Brian Schumaker and his favorite passenger, a pet macaw, take a cruise on a ten-speed bicycle. (photos by S. A. Brennan) Located close to the naval station—only 40 minutes by car—Disneyland offers fun for children and adults. (photo by Linda Mitchell)



Gunner's Mate

story and photos
by Tracy L. Tanner

Despite popular belief, there's more to being a Coast Guard gunner's mate than pulling the trigger. "In fact," Petty Officer

3rd Class Roger Dize, a gunner's mate stationed at the Coast Guard Reserve Training Center in Yorktown, Va., explained, "we usually don't fire at all. We're simply the safety observers or maintenance personnel. Aboard a ship, the cooks and boat-swain's mates do the actual

firing. We tell them how, then make sure they don't break anything while they're firing."

Dize jokingly added that sometimes assuring safe and proper firing means standing behind the operator with a billy club. However lighthearted that may sound, Dize and his gunner's mate buddies are serious about the proper use of 'their' weapons.

"We are responsible for the maintenance, repair and accurate use of an assortment of weapons, from small arms to 5-inch cannons," explained Petty Officer 2nd Class J. D.

McBroom, also a gunner's mate at Yorktown. "That responsibility means assuring this valuable equipment is taken care of properly and fired safely. Sure, a billy club may sound extreme," McBroom said, "but if that's what it takes . . ."

"Aside from assuring the weapons are used properly, we must also be able to disassemble, clean and reassemble them. Because we clean the weapons everyone fires, we usually have at least 30 weapons at one time," McBroom explained. "Instead of cleaning them manually, we use an ultrasonic machine. After disassembling the weapons, the parts are placed in a large tank of vibrating chemicals which dissolve the carbon and lead particles. This cuts cleaning time in half.

"We also maintain and repair

Petty Officer 3rd Class Roger Dize, a gunner's mate stationed at the Coast Guard Reserve Training Center in Yorktown, Va. prepares an M16A1 rifle for cleaning. One step in disassembling the rifle is the removal of the handguards.





the cleaning machine, magazine (ammunition storage space) sprinkler systems, and hoists used to transport ammunition to the ship's gun mount," McBroom concluded.

Training for a gunner's mate can begin as early as high school. Dize recommends anyone seeking a position in this career field concentrate their studies in mathematics, electricity, physics and shopwork.

"Mathematics is utilized in inventory," he said. "One of the necessary skills a gunner's mate must have is keeping an accurate inventory of ammunition. There's no such thing as being off a couple of bullets here or there. Each individual round must be accounted for," Dize stressed.

Prospective gunner's mates attend 16 weeks of training. While at school, they are introduced to basic electronics and electricity. Training focuses on ordnance, and provides instruction in mechanics, hydraulics, pneumatics, and the use of hand tools.

McBroom feels the schooling gave him a stable background of the basics, but stressed that once in the field, a gunner's mate must be eager to learn. "While still new in the field, a gunner's mate spends a lot of time chipping paint and cleaning. That's how it goes in any career field," he explained. "But when there's spare time, the young gunner's mate needs to take some initiative and ask questions. This is the best way to learn."

"And," McBroom continued, "a gunner's mate can never take on a 'know-it-all' attitude. Each new station has at least one different piece of equipment. Sometimes the higher ranks will find themselves learning from the lower ranks. Plus, ever-changing technology doesn't allow us to become fixed into working only one type of machine or circuitry."

"Although our job can sometimes be tedious, it rarely becomes ordinary or repetitious. As a gunner's mate, I can always look forward to working with my

Dize checks an M16A1 rifle barrel for cleanliness. Debris in the barrel can cause the rifle to function improperly.

hands. Even as I advance in rank, my experience will not be wasted on pushing paper. Sometimes I may give a job to someone less experienced but I'll still be looking over their shoulder to make sure it's done right. It's satisfying to know my experience will always be utilized."

Along with the service's needs, gunner's mates find their training desirable in civilian job markets. Dize listed gunsmiths, locksmiths, machinists, ammunition foremen, armorers and hydraulic equipment mechanics as a few of the positions his training qualifies him for.

"It's nice to know that if the need ever arose for me to leave the Coast Guard, I wouldn't be without a working trade. But, for now, I'm satisfied with where I am, and the opportunity to do what I am trained to do."



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For my part, I travel not to go anywhere,
but to go. I travel for travel's sake. The great
affair is to move.

Robert Louis Stevenson 1878

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